

**Montana Board of Oil and Gas Conservation  
Environmental Assessment**

**Operator:** Kykuit Resources, LLC  
**Well Name/Number:** Asbjornson 24-21-20  
**Location:** SE NW Section 24 T21N R19E  
**County:** Fergus, MT; **Field (or Wildcat)** Wildcat

**Air Quality**

(possible concerns)

Long drilling time: No, 2 to 3 days drilling time.  
Unusually deep drilling (high horsepower rig): No, small single derrick drilling rig TD 2200'.  
Possible H<sub>2</sub>S gas production: None anticipated.  
In/near Class I air quality area: Not in a Class I air quality area.  
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)  
☐ Gas plants/pipelines available for sour gas  
☐ Special equipment/procedures requirements  
☐ Other: \_\_\_\_\_  
Comments: No, small single drilling rig TD 2200'. No concerns.

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**Water Quality**

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater mud system to be used.  
High water table: No, high water table expected.  
Surface drainage leads to live water: Yes, closest drainage is an unnamed ephemeral tributary drainage to South Fork Cut Bank Creek, about 1/8 of a mile to the north of this location. Within South Fork Cut Bank Creek is a large stock pond, about 1/8 of a mile to the west from this location.  
Water well contamination: No, closest water wells are about 5/8 of a mile to the east and 3/4 of a mile to the northwest of this location. Depth of these wells are 820' to 1480'. Surface hole will be drilled with freshwater to 150'. Steel surface casing will be run and cemented to surface to protect ground waters. If production is encountered 4 1/2" casing will be run and cemented from total depth to surface.  
Porous/permeable soils: No, sandy bentonitic soils.  
Class I stream drainage: No, Class I stream drainages nearby.

Mitigation:

☐ Lined reserve pit  
☒ Adequate surface casing  
☐ Berms/dykes, re-routed drainage  
☐ Closed mud system  
☐ Off-site disposal of solids/liquids (in approved facility)  
☐ Other: \_\_\_\_\_  
Comments: Adequate surface casing to be set, 150' to protect ground waters.

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## Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, streams to be crossed, only ephemeral drainages.

High erosion potential: No, small cut up to 4.7' and small fill up to 4.4', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, small drillsite, 200'X200'.

Damage to improvements: None, surface use is cultivated land.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other \_\_\_\_\_

Comments: Will utilize existing county, Knox Ridge and 2 Calf Road and existing ranch trails. Short access off existing ranch trail to be build, about 3/8 of a mile of new access will be built into this location. Unlined earthen pits will be utilized for drilling. Drilling fluids will used to seal surface owners stock pond. Solids will be allowed to dry in the pits. When pits are dry they will be filled in with subsoil and topsoil spread.

## Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are about 1 mile to the northeast.

The town of Winifred, about 8.5 miles to the southwest of this location.

Possibility of H2S: No, none anticipated.

Size of rig/length of drilling time: Small single derrick drilling rig/Short drilling time 2 to 3 days.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: Adequate amount of surface casing and BOP equipment should mitigate any problems.

## Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: None

Conflict with game range/refuge management: None

Threatened or endangered Species: Threatened or endangered species identified are the Pallid Sturgeon and Black-Footed Ferret. Species of concern is the Greater Sage Grouse.

Mitigation:

☐ Avoidance (topographic tolerance/exception)  
☐ Other agency review (DFWP, federal agencies, DSL)  
☐ Screening/fencing of pits, drillsite  
☐ Other: \_\_\_\_\_  
Comments: Surface is cultivated private land. No concerns.

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### Historical/Cultural/Paleontological

(possible concerns)  
Proximity to known sites None identified  
Mitigation  
☐ avoidance (topographic tolerance, location exception)  
☐ other agency review (SHPO, DSL, federal agencies)  
☐ Other: \_\_\_\_\_  
Comments: Surface is cultivated private land. No concerns.

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### Social/Economic

(possible concerns)  
☐ Substantial effect on tax base  
☐ Create demand for new governmental services  
☐ Population increase or relocation  
Comments: No, impact expected from the drilling of this well.

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### Remarks or Special Concerns for this site

No special concerns about this wellsite. This is a Colorado Formation test to be drilled to 2200' TD.

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### Summary: Evaluation of Impacts and Cumulative effects

No significant or long term impacts expected from the drilling of this well. Some short term impacts will occur.

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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ Steven Sasaki  
(title:) Chief Field Inspector  
Date: May 21, 2010

Other Persons Contacted:  
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Montana Bureau of Mines and Geology, GWIC website  
(Name and Agency)  
Fergus County water wells  
(subject discussed)  
May 21, 2010  
(date)

US Fish and Wildlife, Region 6 website  
(Name and Agency)  
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA  
COUNTIES, Fergus County  
(subject discussed)  
May 21, 2010  
(date)

Ms. Windy Davis, Montana FWP  
(Name and Agency)  
Greater Sage Grouse Lecks in Fergus County, Montana  
(subject discussed)  
May 21, 2010  
(date)

If location was inspected before permit approval:  
Inspection date: \_\_\_\_\_  
Inspector: \_\_\_\_\_  
Others present during inspection: \_\_\_\_\_